Phil 12
Fall, 2003-10-14

Directions and Sample Questions for First Exam

I. Logic and Basic Scientific Reasoning

A. Definitions: Define the following terms in one or two sentences each (10 points)

   argument

B. Conditionals: Restate each of the following conditionals in standard "if, then" form, and state the conditions under which it is false. (10 points)

   Only if you follow the directions will you pass the exam

C. Conditional arguments: If the conditional in the following arguments is not in standard "if, then" form, restate it in such. Name the form of each of the following conditional arguments and state whether it is valid or not. (20 points)

   You will pass the exam since only if you follow directions will you pass the exam, and you always follow directions.

D. Evidential Relations: Answer the following questions about the logic relations involved in evaluating hypotheses, including showing the form of argument involved, and illustrate with an example in a short paragraph. (15 points)

   Why is it that, despite making many true predictions, a hypothesis could still turn out to be false?

II. Observation

A. Observation, Categorization, and Taxonomy: Answer the following questions about observation, categorization, and taxonomy in a short paragraph, making it clear how it illustrates a feature of science. (10 points)

   What theme is illustrated by the photograph to the left?

B. Definitions: Define the following terms used to describe features of observational research, including variables and their measurement, in one or two sentences each. (15 points)

   Nominal variable

C. Observational research, variables, and measurement: Answer the following true/false or multiple choice questions.   (20 points)

   What percent of scores lie within 2 standard deviations of the mean of a distribution?